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NASA's Solar System Treks: Online Portals for Planetary Mapping and Modeling

NASA's Solar System Treks are a suite of web-based of lunar and planetary mapping and modeling portals providing interactive visualization and analysis tools enabling mission planners, planetary scientists, students, and the general public to access mapped lunar data products from past and current missions for the Moon, Mars, Vesta, and more. New portals for additional planetary bodies are being planned. This presentation will recap significant enhancements to these toolsets during the past year and look ahead to future features and releases.

Moon Trek is a new portal replacing its predecessor, the Lunar Mapping and Modeling Portal (LMMP), that significantly upgrades and builds upon the capabilities of LMMP. It features greatly improved navigation, 3D visualization, fly-overs, performance, and reliability. Additional data products and tools continue to be added. These include both generalized products as well as polar data products specifically targeting potential sites for NASA's Resource Prospector mission as well as for missions being planned by NASA's international partners.

The latest release of Mars Trek includes new tools and data products requested by NASA's Planetary Science Division to support site selection and analysis for Mars Human Landing Exploration Zone Sites. Also being given very high priority by NASA Headquarters is Mars Trek's use as a means to directly involve the public in upcoming missions, letting them explore the areas the agency is focusing upon, understand what makes these sites so fascinating, follow the selection process, and get caught up in the excitement of exploring Mars.

Phobos Trek, the latest effort in the Solar System Treks suite, is being developed in coordination with the International Phobos/Deimos Landing Site Working Group, with landing site selection and analysis for JAXA's MMX mission as a primary driver.